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United States Patent [19]**Hillstead**[11] **Patent Number:** **5,135,536**[45] **Date of Patent:** **Aug. 4, 1992**[54] **ENDOVASCULAR STENT AND METHOD**[75] **Inventor:** **Richard A. Hillstead, Miami, Fla.**[73] **Assignee:** **Cordis Corporation, Miami Lakes, Fla.**[21] **Appl. No.:** **650,699**[22] **Filed:** **Feb. 5, 1991**[51] **Int. Cl.⁵** **A61M 29/00; A61F 2/06; A61F 2/04**[52] **U.S. Cl.** **606/195; 623/1; 623/12**[58] **Field of Search** **606/108, 191-195; 623/1, 12; 604/96**[56] **References Cited****U.S. PATENT DOCUMENTS**

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A stent for reinforcing a vessel wall is disclosed. The stent is constructed from a single elongated wire. The wire is first bent into a series of tight bends. The wire is then rolled around a mandrel to create junctions of wire which are permanently adhered. The completed stent forms a cylindrical form which can be expanded from an initial diameter to a larger implanted diameter by application of a radially outward force from a balloon catheter or the like.

24 Claims, 4 Drawing Sheets